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(54) EXTRACTION AND PURIFICATION OF PLANT DNA

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a method for extracting and purifying a plant DNA from a plant material containing the DNA in a short time and in a high purity without requiring a complicated operation.

SOLUTION: This method for extracting and purifying a plant DNA comprises the following processes (a) to (e); (a) mixing a plant material with a solution containing a surfactant and, if necessary, a protein-denaturing agent to lyse cells in the plant material; (b) mixing the obtained lysed cell liquid with an organic solvent for extracting the surfactant to separate the aqueous phase from the organic solvent phase; (c) mixing the obtained aqueous phase with an adsorption liquid containing a chaotropic substance and a nucleic acid-binding solid phase carrier under a neutral to weakly alkaline condition to allow the nucleic acid-binding solid phase carrier to adsorb the plant DNA contained in the plant material; (d) washing the nucleic acid-binding solid phase carrier adsorbing the plant DNA with a washing liquid to remove saccharides and proteins contained in the plant cells; and (e) eluting the DNA bond to the nucleic acid-binding solid phase carrier.

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